

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF WISCONSIN**

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**UNITED STATES OF AMERICA,**

**Plaintiff,**

**v.**

**Case No. 17-CR-167**

**DERRICK L. HARRIS,**

**Defendant.**

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**ORDER ON GOVERNMENT’S MOTION TO BAR TESTIMONY OF  
DEFENSE EXPERT DR. STEPHEN A. BATZER**

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Derrick Harris is charged in a superseding indictment in Count One with retaliation against an informant, in violation of 18 U.S.C. §§ 1513(b)(2) and 2 and in Count Two with discharge of a firearm during a crime of violence, in violation of 18 U.S.C. §§ 924(c)(1)(A)(iii) and 2. (Docket # 123.)

Before me is the government’s motion *in limine* to bar Harris’ expert Dr. Stephen Batzer from testifying at trial. An evidentiary hearing pursuant to *Daubert v. Merrill Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) was held on August 2, 2018. Dr. Batzer testified at the hearing. For the reasons explained below, the government’s motion to exclude Dr. Batzer’s testimony is granted in part and denied in part.

**FACTUAL BACKGROUND**

The government alleges that Harris fired a shot and hit the government informant’s car. Specifically, the government alleges that the bullet struck the informant’s rear driver’s side door. The government’s expert will testify that damage found on the rear driver’s side door of the informant’s car is consistent with damage produced “by a bullet and/or debris.”

(Report of Theodore J. Chavez at 1, Docket # 141-7.) Harris, however, asserts that he only fired a warning shot. (Expert Report at 7, Docket # 127-1.) Harris also asserts that the damage to the informant's car is consistent with blunt force, not a bullet.

Harris filed an expert disclosure proposing that Dr. Batzer provide expert testimony in four areas—firearm ballistics analysis, trace element testing, indentation shape analysis, and witness credibility. (Expert Report, Docket # 127-1.) Dr. Batzer has a Ph.D. in mechanical engineering and is a board certified forensic engineer. (Affidavit of Stephen A. Batzer ¶ 6, Docket # 141-1.) Dr. Batzer is a member of a variety of engineering organizations, including the American Society of Mechanical Engineers. (*Id.*) He taught mechanical engineering at five different universities and has given numerous public seminars and short courses regarding forensic work, including firearms cases. (*Id.*) Dr. Batzer is a retired Lieutenant Colonel of Ordnance (that is, weapons and munitions), having served twenty years in the US Army. (*Id.*) He was frequently a range safety officer while on active and reserve duty, and regularly performs range safety duties today. (*Id.*) Dr. Batzer hunts and participates in weekend black powder cartridge rifle competitive shooting which he states gives him substantial insight into bullet ballistics. (*Id.*) Dr. Batzer has investigated numerous serious firearms accidents. (*Id.*)

Dr. Batzer has owned over 100 unique firearm designs during his lifetime and has visited countless firearms and military museums due to a lifelong interest. (*Id.*) He has attended numerous shooting clinics and is a Michigan-licensed concealed carry permit holder and longstanding NRA member. (*Id.*)

As to his proffered opinions, Dr. Batzer opines that the inclination angle of the indentation on the left second row door of the subject vehicle indicates that the indentation

was not caused by a bullet discharged from a pistol held by a man standing behind the rear of the vehicle. (Expert Report at 4.) Dr. Batzer opines that to make the indentation found on the vehicle in question, the shooter would have to be substantially to the left of the vehicle and crouched or flat, not aligned with the vehicle centerline and normally standing. (*Id.* at 6.) Dr. Batzer also opines that, based upon his knowledge and experience, and his reconstruction of the scene, Harris did not shoot the informant's car, and because "[Harris] did not shoot it, there is a strong reason to believe that he did not shoot at it; the video and recreation photo set forth . . . show that it was an easy shot . . . Mr. Harris had the opportunity to empty the pistol's magazine into the Impala." (*Id.* at 7.)

As to the trace element testing, Dr. Batzer opines that the testing conducted by the FBI indicates that the indentation on the vehicle was not caused by a bullet. (*Id.*) Dr. Batzer states that neither copper nor lead was found on the vehicle and states that copper and lead "simply do not wash away." (*Id.*) Dr. Batzer opines that if the vehicle had been struck by a bullet, copper and lead would be present. (*Id.*)

As to the indentation shape opinion, Dr. Batzer opines that the indentation shape on the vehicle is not indicative of a pistol bullet strike; rather, it is indicative of an impact by a curved hard rod, such as a tire iron, based upon a comparison he made with a point-blank bullet strike to a 2001 Impala. (*Id.* at 7-10.) Dr. Batzer opines that the damage to the informant's car was not caused by a bullet, but rather by the informant "damaging his car after he left the scene and blaming Mr. Harris." (*Id.* at 11.)

Lastly, Dr. Batzer offers his opinion on witness credibility, including that "Mr. Harris is credible and that the safe discharge of his pistol as a warning shot was reasonable,"

(*id.* at 10-11); and that the informant “is not credible and his actions were needlessly provocative” (*id.* at 11).

## ANALYSIS

The government argues that Dr. Batzer does not possess the necessary training and experience to render an opinion and that his conclusions are not based on correct facts or reliable techniques. Accordingly, the government argues that his expert testimony is not admissible.

The admissibility of expert testimony is governed by Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). *United States v. Pansier*, 576 F.3d 726, 737 (7th Cir. 2009). Rule 702 provides that:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

(a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

The inquiry consists of three general areas: (1) the testimony must be “helpful,” which dovetails with the relevance requirements of Fed. R. Evid. 401–403; (2) the expert must be qualified by knowledge, skill, experience, training, or education; and (3) the testimony must be reliable and fit the facts of the case. *Lyman v. St. Jude Medical S.C., Inc.*, 580 F. Supp. 2d 719, 722 (E.D. Wis. 2008).

Whether an expert is qualified to render an opinion must be considered on a question-by-question basis. *See Gayton v. McCoy*, 593 F.3d 610, 617 (7th Cir. 2010) (internal citation omitted) (“The question we must ask is not whether an expert witness is qualified in

general, but whether his ‘qualifications provide a foundation for [him] to answer a specific question.’”).

As to reliability, the court examines whether (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case. Fed. R. Evid. 702. The district court must act as the gatekeeper to ensure that the proffered testimony is both relevant and reliable. *Pansier*, 576 F.3d at 737. To help ensure the reliability of expert testimony, the court considers, for example, whether the theory can be and has been verified by the scientific method through testing, whether the theory has been subjected to peer review, the known or potential rate of error, and the general acceptance of the theory in the scientific community. *Cummins v. Lyle Indus.*, 93 F.3d 362, 368 (7th Cir. 1996). The court must also ensure that there is a credible link between the evidence and the conclusion of the expert. *See General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997) (“A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.”).

Despite the court’s role as a gate keeper, expert testimony is liberally admissible under the Federal Rules of Evidence. *Lyman*, 580 F. Supp. 2d at 723. “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Daubert*, 509 U.S. at 596.

Again, Harris offers Dr. Batzer’s testimony regarding four areas—firearm ballistics analysis, trace element testing, indentation shape analysis, and witness credibility. I will address each area in turn.

1. *Opinion on Inclination Angle*

Dr. Batzer opines that the inclination angle of the indentation on the left second row door of the subject vehicle indicates that the indentation was not caused by a bullet discharged from a pistol held by a man standing behind the rear of the vehicle. (Expert Report at 4.) In reaching this conclusion, Dr. Batzer looked at two photographs of the informant's vehicle provided to him by the FBI, which show the angle of the indentation relative to the trim of the mid-level of the door panel. (*Id.*) Dr. Batzer notes that the angle is upward from rear-to-front. (*Id.*)

Dr. Batzer used a silhouette of the model year Impala and measured the inclination angle of the door trim as  $\sim 1.9^\circ$  downward, measured rear to front. (*Id.*) Using that as a datum, the angle of the subject indentation using photographic analysis is  $\sim 5.2^\circ$  upward. (*Id.*) Dr. Batzer found that his physical measurements of the door suggested that the upward angle of the dent was about  $\sim 3.7^\circ$  upward. (*Id.* at 4-5.) Dr. Batzer then found that the rearmost point of the indentation was  $\sim 24.5"$  from the ground and opined as to the "envelope" of where a shooter would have to be to make the indentation. (*Id.* at 5.)

Based on his measurements, Dr. Batzer opines that even if Harris was lying on the ground during the shot, he could not make a mark on the informant's vehicle door consistent with what was seen on the vehicle. (*Id.*) Dr. Batzer opines that it is impossible to make the mark from the position Harris states he was standing in unless he shot at the roadway and the bullet travelled upward as a ricochet. (*Id.*) Dr. Batzer opines that to make the indentation found on the vehicle in question, the shooter would have to be substantially to the left of the vehicle and crouched or flat, not aligned with the vehicle centerline and normally standing. (*Id.* at 6.) Dr. Batzer relies on "simple geometric illustrations" to

“indicate that if the second row left door indentation now found on the maroon 2006 Impala [the informant’s car] had come from a bullet, then this bullet was not fired by Mr. Harris.” (*Id.* at 6-7.)

The government challenges both Dr. Batzer’s qualifications to offer a ballistics opinion and the methodology he used to render his opinion. Specifically, the government argues Dr. Batzer lacks the requisite knowledge, experience, and training to qualify him as a ballistics expert and Dr. Batzer’s opinion is based upon incorrect and unreliable information. The government argues that Dr. Batzer’s educational and professional background is in mechanical engineering and crashworthiness of vehicles. (Gov’t Br. at 7-8, Docket # 139.) The government argues that there is no connection between that expertise and firearms analysis, specifically as to the question of whether the strike on the informant’s vehicle was caused by the discharge of ammunition from a firearm. (*Id.* at 8.) As to methodology, the government argues that Dr. Batzer’s recreation of the scene was flawed because Dr. Batzer had Harris stand in the center of the roadway and pretend to aim a firearm down the street when video footage shows that Harris was not standing in the center of the street when he fired the shot. (*Id.* at 10.)

The government contrasts Dr. Batzer’s qualifications to that of its expert, Theodore J. Chavez, an FBI Physical Scientist/Forensic Examiner who is employed by the FBI’s Firearms/Toolmarks Unit where he conducts examinations on firearms and toolmark evidence. (*Id.* at 8.) Indisputably, Dr. Batzer does not have the same training and experience as Chavez. But Harris need only show that Dr. Batzer is qualified to render his opinion, not that his qualification are identical or superior to Chavez. Dr. Batzer testified that he has experience in reconstructing shooting incidents where he was required to determine where

the shooter was standing and how the bullet ricocheted. He testified that he has experience looking at mechanisms in firearms, through his Ph.D in mechanical engineering and through his time in the military as an ordnance officer.

Dr. Batzer testified that he participates in shooting competitions where he works as a spotter, meaning he watches the arc of the bullet and gives feedback to the shooter. Thus, Dr. Batzer testified that he has knowledge of how a bullet arcs. Dr. Batzer explained that when a bullet travels a short distance, it travels in a linear path; however, when a bullet travels a long distance, it arcs. Dr. Batzer also testified that his experience with crashworthiness cases allows him to understand how metal deforms. Dr. Batzer testified that while he has never previously testified in court regarding bullet strikes, he has testified in cases regarding bullet trajectory where he did a similar analysis as he did in this case. The question is not whether Dr. Batzer can render ballistics opinions in general. Rather, the question is whether he has the education, training, and/or experience to render the specific opinion he is proffering. Based on Dr. Batzer's experiences, I cannot say that he is not qualified to render an opinion as to the inclination angle of the indentation on the vehicle indicating that the indentation was not caused by a bullet discharged from a pistol held by a man standing behind the rear of the vehicle.

The government also challenges Dr. Batzer's methodology in reconstructing the alleged shooting scene, arguing that Dr. Batzer had Harris stand in the center of the roadway and pretend to aim a firearm down the street when video footage shows that Harris was not standing in the center of the street when he fired the shot. But Harris states that to the best of his recollection, the vehicle in question was just over the centerline of the roadway and Harris was in the center of the roadway. (Expert Report at 6.) Thus, the issue



is not with Dr. Batzer's methodology in recreating the scene, but with a dispute of fact between the parties. Again, "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert*, 509 U.S. at 596. The facts can be fleshed out and challenged on cross-examination and the government can argue the weight that should be given to Dr. Batzer's opinions. For these reasons, the government's motion to exclude Dr. Batzer's ballistics testimony is denied.

2. *Opinion on Trace Element Testing*

The FBI conducted a presumptive chemical test on the informant's car and the test was negative for both lead and copper. (Report of Theodore J. Chavez.) Chavez concluded that the damage on the informant's car was consistent with damage produced by "a bullet and/or debris." (*Id.* at 1.) Chavez noted that the presumptive chemical tests are not conclusive and are meant to provide additional information regarding the possibility of a bullet impact and cannot distinguish whether lead and copper are deposited by a bullet or by another source. (*Id.* at 2.)

Dr. Batzer opines that the trace element testing conducted by the FBI in this case indicates that the indentation to the informant's car was not caused by a bullet. (Expert Report at 7.) Dr. Batzer explains that when a bullet strikes a car and ricochets, there will be substantial interfacial pressure between the bullet and the paint and there will be a transfer of metal to the remaining coating. (*Id.*) He stated that both copper from the jacket and lead from the bullet are typical and expected residues. (*Id.*) Dr. Batzer stated that copper and lead are durable forensic indicators because they are insoluble in water. (*Id.*) Dr. Batzer opined

that because neither copper nor lead was found on the informant's vehicle, the mark on the informant's car is not a bullet strike. (*Id.*)

The issue in this case, then, is not whether lead and/or copper were found on the informant's car—FBI testing did not find these elements on the vehicle and Dr. Batzer relies on this conclusion in his expert report. Nor is the issue whether lead and/or copper are water insoluble. The issue is whether Dr. Batzer is qualified to testify that because lead and copper were not found on the informant's car, this conclusively indicates that the mark on the vehicle is not a bullet strike.

Dr. Batzer testified that trace element analysis consists of studying the impact between two solids—the science of detecting materials. Dr. Batzer testified that he taught manufacturing courses on trace element testing and published an article involving trace element analysis. See “Forensic Engineering Analysis of a Fatal Trailer Wheel-Separation Failure,” Batzer, S. A., *Journal of the National Academy of Forensic Engineers*, Vol. 34, No. 2, 2017. However, and importantly, Dr. Batzer testified that while he previously worked on cases with trace element testing, he has not specifically looked at copper and lead residue from a bullet. For this reason, Harris fails to bridge the gap in explaining how Dr. Batzer's training and experience with trace elements related to manufacturing and forensic engineering translate into his qualification to render a conclusive opinion about trace elements and bullet strikes. See *Joiner*, 522 U.S. at 146. Thus, the government's motion to exclude Dr. Batzer's opinion regarding the trace element testing is granted.

### 3. *Opinion on Indentation Shape*

Dr. Batzer opines that the indentation shape found on the informant's car is not indicative of a pistol bullet strike; rather, it is indicative of an impact by a curved hard rod,

such as a tire iron. (Expert Report at 7.) Dr. Batzer states that “[i]n order to see what a bullet strike would look like, he shot a white Impala into the second row left door from the rear at approximately the same position as the subject indentation.” (*Id.*) Because of safety concerns, Dr. Batzer did not try to replicate the indentation inclination angle, but rather shot downward so the bullet struck the sandy soil. (*Id.*) Dr. Batzer purchased .40 S&W rounds with the same headstamp as the casing recovered at the Cham Tap bar. (*Id.* at 8.) He used a camera tripod as a rest to ensure that the inclination angle was approximately 5° downward and that the yaw angle into the vehicle was also approximately 5°. (*Id.*)

Dr. Batzer stated that the bullet ricocheted from the vehicle’s door skin and did not strike anything downrange of value. (*Id.*) It produced a dent in the vehicle. (*Id.*) Dr. Batzer viewed the dent and felt it with his index finger, which he stated provided “substantial information.” (*Id.*) Dr. Batzer found that the bullet dent he produced was profoundly not like the indentation in the informant’s car. (*Id.*) Specifically, Dr. Batzer found that the bullet indentation on the white Impala was smooth and continuous whereas the indentation on the informant’s car has a discontinuity he can feel with his finger. (*Id.* at 9.) Also, the impact by the bullet into the white Impala shows a substantially asymmetric indentation while the indentation on the informant’s car does not have this asymmetric geometric pattern. (*Id.*) Rather, indentation on the informant’s car is largely symmetric. (*Id.*) Finally, Dr. Batzer stated that on the white Impala, the bullet mark has a clearly defined start and stop point where the bullet initially touched finally broke contact; whereas on the informant’s car, there is no similar clearly defined start and stop point. (*Id.* at 10.)

Beyond the government’s general challenge to Dr. Batzer’s qualifications, the government specifically challenges Dr. Batzer’s methodology as to his indentation shape

opinion. As to Dr. Batzer's qualifications to testify as to the indentation shape, Dr. Batzer testified that his previous work with sheet metal gave him knowledge of how metal deforms. Dr. Batzer also testified that his work as a mechanical engineer, including his research on bullet strikes and accident reconstruction (i.e., in crashworthiness cases) educated him in how metal deforms. Dr. Batzer testified that based on his knowledge and experience, he can visually observe a piece of metal and know whether a bullet bounced off or penetrated the metal because the marks will look different. Dr. Batzer testified that he has taught manufacturing courses in indentation analysis and has taken course work through his manufacturing background on deformation of sheet metal. Like his expert qualifications for ballistics, Dr. Batzer's qualifications to testify regarding what caused the indentation shape on the informant's vehicle are more unconventional. However, I find that based on Dr. Batzer's training, education, and experience, he is qualified to render an opinion that the indentation shape found on the informant's car is not indicative of a pistol bullet strike; rather, it is indicative of an impact by a curved hard rod, such as a tire iron. Importantly, though, Dr. Batzer has no education, training and/or experience, or factual basis to testify that the damage was done by the informant after he left the scene. That is a leap too far.

Regarding methodology, the government argues that the analysis was premised on an unreliable comparison because he attempted to replicate the indentation angle by firing a shot at a 2001 Impala from point-blank range when the video footage shows that the informant's car was far past the bar when Harris allegedly discharged the firearm. (Docket # 139 at 10.) Thus, the government concludes that Dr. Batzer's opinion is not based upon reliable techniques because his basis of comparison is not consistent with the facts of the case. (*Id.*) Again, Harris disputes the facts of this case and like the ballistics testimony, the

government can address any perceived flaws in Dr. Batzer's testimony through vigorous cross-examination. For these reasons, the government's motion to exclude Dr. Batzer's testimony regarding indentation analysis is denied.

4. *Opinion on Witness Credibility*

Dr. Batzer states that forensic engineers must rely on the testimony of fact witnesses and evaluate their credibility. (Expert Report at 10.) He opines that Harris is credible and that the safe discharge of his pistol as a warning shot was reasonable. (*Id.*) Dr. Batzer bases his opinion on the fact that Harris is well-spoken, a family man, employed, has no previous interactions with the criminal justice system, has a legal pistol, and was cooperative with police. (*Id.*) On the other hand, Dr. Batzer opines that the informant is not credible because his actions were needlessly provocative, he showed an astonishing lack of judgment, he is a felon, he showed antipathy towards Harris during his videotaped police statement, the informant allegedly damaged his own vehicle, the new owner of the informant's vehicle was dissatisfied with the informant's representations about the vehicle, and the informant was not clever enough to create the linear dent on his car. (*Id.* at 11.)

Although Harris now states that he does not intend to ask any question of Dr. Batzer regarding his opinion as to the credibility of either Harris or the informant, (Docket # 141 at 3), the mere fact that Dr. Batzer included such credibility opinions in his report is problematic and concerning. The Seventh Circuit has made clear that an expert cannot testify as to credibility issues, as credibility questions "are within the province of the trier of fact." *Goodwin v. MTD Prod., Inc.*, 232 F.3d 600, 609 (7th Cir. 2000). For this reason, Dr. Batzer is not permitted to testify as to Harris' and the informant's credibility. Thus, the government's motion to exclude Dr. Batzer's testimony regarding credibility is granted.

## ORDER

**NOW, THEREFORE, IT IS HEREBY ORDERED THAT** the government's motion to exclude the expert testimony of Dr. Stephen A. Batzer is **GRANTED IN PART AND DENIED IN PART**. Dr. Batzer is permitted to offer his opinion on the inclination angle of the indentation and his opinion regarding the shape of the indentation. However, Dr. Batzer is not permitted to give his opinion that the informant caused the indentation on the car, on the trace element testing and the bullet strike, and on the credibility of any witnesses.

Your attention is directed to General L.R. 72(c), 28 U.S.C. § 636(b)(1)(B) and Federal Rules of Criminal Procedure 59(b), or Federal Rules of Civil Procedure 72(b) if applicable, whereby written objections to any recommendation or order herein, or part thereof, may be filed within fourteen days of the date of service of the recommendation or order. Objections are to be filed in accordance with the Eastern District of Wisconsin's electronic case filing procedures. Courtesy paper copies of any objections shall be sent directly to the chambers of the district judge assigned to the case. Failure to file a timely objection with the district court shall result in a waiver of a party's right to appeal. If no response or reply will be filed, please notify the Court in writing.

Dated at Milwaukee, Wisconsin this 3<sup>rd</sup> day of October, 2018.

BY THE COURT

s/Nancy Joseph  
NANCY JOSEPH  
United States Magistrate Judge